PERESTROIKA AND PRODUCTION:
MANAGEMENT'S RESPONSE TO REFORM

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NOTE*

This paper was distributed at the NATO Annual Economics Colloquium in March, 1989 and has therefore been in the hands of most Government specialists since that time. It contains:

(a) A concise summary of Soviet economic reform in the first three years of Gorbachev's reign, already somewhat dated by events since, but a useful reminder to the specialist of evolution and contradictions, and a valuable account and reference for the general reader.

(b) An analysis of whether enterprise management, or management training, has been a constraint on the effort to accelerate economic growth, raise the technological level of industry, and improve the quantity and quality of consumer goods. This analysis includes:

(c) The results of surveys reported in the Soviet press to gauge management's response to perestroika, as contrasted with evidence from intensive interviews with recent emigrants who held responsible positions in the Soviet economic bureaucracy.

(d) An examination of management as a factor of production and the kinds of decisions Soviet managers make, and the elements which affect these decisions.

(e) An analysis of management's response to new economic conditions produced by perestroika, which concludes that Western analysts would be wise to question the view prevailing in the Soviet press that Soviet managers are incapable of working in a competitive environment. Rather, rational managers will be reluctant to alter their decisions in light of intrinsic inconsistencies and partial implementation of reform.

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Perestroika and Production: Management's Response to Reform

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This paper was prepared for the Annual Economics Colloquium at NATO (March 1989).
The economic reforms proposed in the first three years of Mikhail Gorbachev's tenure as General Secretary have been impressive, embracing nearly every sector of the economy and providing for changes in the economic system that most western experts previously thought would never be seriously considered by Soviet leaders. Reform rhetoric is not unique to the current leadership, however. Gorbachev's emphasis on reform stems in part from the tradition in Soviet society of the political leadership seeking to improve the performance of the economy through organizational changes, policy changes (investment, wage, or price level changes, for example), and changes in the criteria by which economic performance is measured. So frequent have been the reform efforts in recent decades that Gertrude Schroeder describes the Soviet economy as trudging on a "treadmill" of reforms.

The tradition of reform is only part of the explanation for Gorbachev's ambitious program for socioeconomic reconstruction. Perhaps more important are the complex problems the current leadership faces; a "pre-crisis" situation which Gorbachev has argued could end catastrophically unless radical measures are implemented. Economic factors -- stagnating growth rates, rising energy costs, declining productivity, lagging technology, a growing foreign trade deficit, regional labor shortages, a rising military burden, poor agricultural performance -- tended to dominate early discussions of the need for reform. Social and political factors have since become equally powerful motivating factors in the call for change.

In an effort to jump-start the Soviet economy and circumvent the impending crisis, Gorbachev initially relied on "traditional" measures to
improve economic performance. Labor discipline, anti-corruption, and anti-alcohol campaigns, plus the wholesale replacement of administrative personnel, were implemented in 1985-1986 to reverse declining labor productivity. A capital modernization program, based on an increase in total capital investment by 5 percent annually from 1986 to 1990, was to permit the reconstruction, re-equipping, and retooling of existing industrial facilities. Gorbachev called for the replacement of over one-third of the total capital stock by 1990 (doubling the retirement rates for capital assets), and placed a greater emphasis on quality -- 90 percent of all machinery was to meet "world standards" by 1990, compared to about 20 percent in 1985. Finally, organizational changes were introduced in an effort to streamline the economic bureaucracy by consolidating or eliminating administrative positions. These traditional reform measures were to generate sufficient productivity gains to achieve the economic growth rate targeted by the Twelfth Five-Year Plan.

Gains in economic performance achieved in 1986 by traditional reform measures were insufficient to meet Gorbachev's goals of uskoreniye (acceleration in the growth of output), intensifikatsiya (improved efficiency in resource utilization), and perestroika (restructuring the economic bureaucracy). Rather than drop these goals, Gorbachev pushed forward in mid-1987 with a series of "radical" reform measures to fundamentally restructure the Soviet economy. Central to this version of reform is the decentralization of economic decision-making by curtailing central directive planning and expanding the rights and responsibilities of industrial enterprises over production and distribution. The components of the radical reform package directed toward decentralizing decision-making include: (i) the
law on state enterprise, (ii) the joint venture decree, and (iii) the laws on cooperatives and leasing.

Under the Law on State Enterprise, Soviet industrial firms are granted more responsibility for formulating annual plans and acquiring the necessary inputs by direct contracting. Managers and workers' collectives are accorded more autonomy in production decisions, and are to be guided in their decision-making by improved performance criteria and enhanced material incentives. Improvements in the performance criteria are to include a comprehensive revision of wholesale and retail prices, profit as the primary success indicator, and performance-based pay for workers. The law encourages managers to negotiate all aspects of production and exchange, with the right to mutually determine selected prices. Firms are permitted to reinvest a portion of their profits on a self-directed basis to facilitate industrial expansion and technological advance. Firms also are granted the right to allocate ruble credit balances to alternative uses. Firms unsuccessful in generating profitable production under the new conditions face bankruptcy.

Gorbachev proposed the legalization of joint ventures as a second measure to decentralize decision-making in the economic bureaucracy. A decree approved by the USSR Council of Ministers on 13 January 1987 authorized Soviet and foreign firms to form limited liability companies, with foreign control of up to 49 percent of the equity. Joint ventures represent a devolution of Gosplan's control over the economic bureaucracy because these firms have the right to make decisions regarding production and distribution independent of Gosplan's material balance planning. Planners perceive potential benefits that outweigh the loss of direct control over these firms -- an opportunity to gain access to Western technology and managerial and technical training, to increase exports of Soviet manufactured goods and obtain hard-currency, to
generate additional investment, and to produce domestically what previously had been imported. Despite a rather adverse economic environment, 300 applications for joint ventures were submitted to the Ministry of Finance within the first year, of which 50 were registered.\textsuperscript{12} To accelerate the formation of joint ventures with Western producers, the Soviet government proposed new regulations, effective January 1989, that (i) allow Western firms to own the majority of equity, (ii) make profit repatriation easier, (iii) reduce the joint venture's tax liability, and (iv) lower tariffs on equipment brought into the USSR.\textsuperscript{13} As a consequence, Serge Raslovleff reports 252 joint ventures registered as of February 1989.\textsuperscript{14}

The producer and consumer cooperatives allowed by the Law on Cooperatives, approved by the Supreme Soviet in May 1988 and put into effect 1 July 1988,\textsuperscript{15} are an important component of Gorbachev's efforts to decentralize decision-making and accelerate the production of consumer goods and services in the Soviet economy. At the same time, however, cooperatives and leaseholding arrangements have been one of the most controversial elements in Gorbachev's program for economic restructuring.\textsuperscript{16} Although lease arrangements in both the agricultural and non-agricultural sectors specified by the decree permit citizens and organizations to establish contracts or agreements regarding the right to use state-owned property, the decree is still vague on such issues as maximum lease duration and regional variation in leasing rules. Furthermore, public attitudes toward cooperatives has been mixed. Cooperatives supplying consumer goods and services have helped to alleviate persistent shortages. Yet, uncertainties regarding the legal status of cooperatives, the relationship between cooperatives and state organizations, and shortages of necessary inputs, have driven prices for goods and services exchanged in the cooperative sector much higher than their
corresponding state retail prices. Public concern over high prices, and high
incomes earned by cooperative members, has caused the Soviet leadership to
implement a progressive tax policy on cooperatives, differentiated on the
basis of the type of cooperative and the aims of their activities.\textsuperscript{17}
Despite credit restrictions, difficulties with supplies, concerns over legal
status, and popular opposition, John Tedstrom reports that by the end of 1988,
some 800,000 people were employed in the cooperative sector.\textsuperscript{18}

The success of \textit{perestroika} hinges on moving the Soviet economy toward
decentralized decision-making. Within three years of coming to power,
Gorbachev has pushed through legislation to decentralize decision-making by
allowing state industrial enterprises more discretionary power over production
and distribution, by legalizing cooperative enterprises, and by encouraging
joint ventures with Western firms. While it is still too early to determine
how far Gorbachev is willing to decentralize economic decision-making, it is
possible to assess how \textit{perestroika} has fared thus far.

\textbf{WHITHER (OR WHETHER) \textit{PERESTROIKA}?

In his closing remarks to the USSR Council of Ministers in January 1989,
Prime Minister Nikolai Ryzhkov offered a fairly uncomplimentary assessment of
Soviet economic performance and the pace of \textit{perestroika}.\textsuperscript{19} Although
national income rose by 4.1 percent in Gorbachev's first year in office, and
consumption and agricultural production increased over 5 percent, growth in
national income during the first three years of the Twelfth Five-Year Plan
averaged only 3.6 percent per year -- matching the average annual rate of
growth for national income during the Eleventh Five-Year Plan -- but well
below the planned growth rate.\textsuperscript{20} Furthermore, transportation bottlenecks,
bad weather, shortages of producer goods, low capital and labor productivity,
and higher quality standards imposed by gospriyemka contributed to sluggish industrial performance between 1986 and 1988.\textsuperscript{21} Continuing underperformance in the agricultural sector -- a 1988 harvest that was 40 million tons under the plan target of 235 million tons, for example -- necessitated food imports from 1986 to 1988 totaling 30 billion rubles.\textsuperscript{22} Shortfalls in the production of consumer goods combined with higher earnings in state and private sectors resulted in the persistence of long queues and contributed to consumer dissatisfaction with perestroika.\textsuperscript{23} Finally, the state budget deficit, estimated in January 1989 at 100 billion rubles, further undermined economic performance.\textsuperscript{24}

Why the lack of success? The papers presented at this conference offer a variety of explanations, from inconsistent goals (for example, perestroika and uskoreniye) to incomplete implementation (for example, no price reform, no wholesale trade network, no convertible currency). This paper investigates whether enterprise management, or management training, has been a constraint to Gorbachev's plan to accelerate economic growth, raise the technological level of industry, and, at the same time, improve the quality and quantity of consumer goods available. First, survey results reported in the Soviet press are used to gauge management's response to perestroika. These results are contrasted with evidence gathered from intensive interviews with recent emigrants to the United States who formerly held responsible positions in the Soviet economic bureaucracy. Second, management is viewed as a factor of production and the kinds of decisions Soviet managers make, and the factors that affect these decisions, are examined. Third, management's response to new the economic conditions introduced by perestroika is analyzed. The data suggest that Western analysts would be wise to question the view prevailing in the Soviet press in 1987-1988 that Soviet managers are incapable of working in a competitive environment.
MANAGEMENT'S PERCEPTION OF PERESTROIKA

Gorbachev's first break from traditional reform rhetoric was glasnost', a campaign to promote more openness in discussions about current conditions in Soviet society. The torrent of information unleashed by glasnost' deluged Western analysts of Soviet society and sparked animated debate in the USSR. Glasnost' also contributed to the resurgence of survey research in the Soviet Union. Not only research institutions, but also the Soviet media have conducted numerous mass surveys and public opinion polls over the past two years to take the pulse of Gorbachev's reform effort.25

The critical tone of public opinion reported in the Soviet press in 1987 reflects less that people tended to oppose perestroika (figures like 75 to 90 percent in favor of perestroika are reported in several surveys), but rather that about half of those surveyed in the USSR felt perestroika was progressing too slowly. Nearly one third were skeptical about possibilities for real change.26 Moreover, of the 1,651 Soviets traveling abroad in 1987 who were interviewed by a research unit of Radio Free Europe/Radio Liberty, the majority who felt that Gorbachev was addressing what they identified as high priority problems (living standards, alcoholism, human rights, religious freedom and so forth) were not able to cite any concrete achievements of perestroika.27 Of the 62 percent who approved of Gorbachev's approach, only 40 percent believed his reform efforts would be fruitful; 24 percent saw imminent failure due to apathy, inertia, and opposition.

The focus here is on management's perception of those aspects of Gorbachev's reform effort that impact on enterprise decision-making. Of greatest interest is management's response measures in the Law on State Enterprise. How will management respond to khozraschet, the possibility of bankruptcy, workers' self-management and the election of directors? Does
management's view of reform differ from that of workers? Also relevant to this analysis are those aspects of the proposed reforms that address the centralized supply system, the pricing system, and the development of new technologies. Finally, how will the operation and performance of the industrial enterprise in general, and enterprise managers in particular, be affected by the leasing and cooperatives decrees, the decrees on joint ventures, and the state acceptance program?

Various polls conducted by Soviet and Western analysts show that people at different levels in the economic bureaucracy have dissimilar views of the operation and performance of their place of work, and the Soviet economy as a whole. Similarly, people at different levels of the economic bureaucracy have disparate perceptions of and responses to efforts to change the bureaucracy. The extent of the challenge Gorbachev faces in restructuring the economic bureaucracy is nowhere more striking than in the fact that of the thousands of Soviet citizens interviewed, none understood how the outcome of perestroika would work in practice. That is, Soviet citizens at all levels of the economic bureaucracy are as concerned about inconsistencies in perestroika (workers' self-management and nomenklatura, for example) as Western analysts who are trying to advise policymakers or formulate appropriate policy responses.

The response to perestroika by industrial workers, enterprise managers, and local party officials illustrates the diversity Gorbachev faces. According to surveys reported in the Soviet press, workers are unlikely to report positive results and thus tend not to support perestroika. In a survey conducted in 1987, workers from 141 enterprises located in 9 cities in the Urals reported their assessments of the prospective impact of perestroika on their collectives' -- less than one-third expected any real results by the
end of the decade; 15 percent expected real results by end of century; almost one-quarter expected results from perestroika to show up only after two decades. In another survey of 6,000 people in industrial enterprises located in 26 boroughs of Moscow, also conducted in 1987, half of the shop superintendents reported "no effect" from perestroika at their place of work; the other half saw perestroika proceeding slowly, and with difficulty. A survey published by Moscow News in 1988 found that over one-third of the industrial workers (n = 120) in factories located in different parts of the country believed that perestroika had had no effect. Workers were skeptical about whether their work conditions would improve as a result of perestroika. Moreover, almost half of the workers surveyed and 60 percent of the engineering-technical personnel reported not understanding how perestroika would in practice change anything at their place of work. Workers tended to be critical of perestroika because they feared loss of pay resulting from factors beyond their control: staff reductions, supply shortages or quality specifications that cause plan underfulfillment and loss of bonus. Sixty-two percent of the workers in a sanitary engineering equipment plant in Moscow felt perestroika increased tension at work. More than half of the engineering-technical workers in 500 Moscow enterprises surveyed complained about excessive work caused by perestroika. Forty percent of the employees in the machine building and metalworking enterprises in Kazakhstan favored existing (pre-perestroika) wage and salary structure.

Survey results suggest that enterprise directors are less likely than workers to oppose perestroika, and are sufficiently informed about the reforms to be able to accurately identify the priorities of perestroika. In a survey where only 16 percent of the workers reported optimism about the benefits of perestroika at their place of work, over 35 percent of the middle-management
personnel (n = 310) and almost half of the enterprise directors (n = 130) saw advantages to perestroika. In another survey conducted in 1988, 21 Baku enterprise directors representing twelve different industries were asked about perestroika. Three out of four reported benefits to their organization stemming from self-financing and new cost-accounting measures. Yet at least half viewed interference and inspections by ministry, financial, and party officials as violating rights granted to them under the state enterprise law. Similarly, 20 percent of the managers surveyed in Moscow in 1987 thought perestroika was proceeding successfully at their place of work; 21 percent reported perestroika had had no effect (no information was given on the responses of the remaining 59 percent). While managers are more likely than workers to support perestroika, they still voice concern over the dominance of "val" as the primary performance indicator, the reliance on inappropriate norms, the lack of funds for social development, and the conflict between the excessive use of "state orders" and the development of a wholesale trade network.

As one would predict, local party officials tend to support perestroika. Almost 15 percent of the party aktiv in Sverdlovsk's upper Iset Burough thought positive results of perestroika were already visible in labor collectives by 1987. But even party officials admitted change has been slow -- nearly 70 percent reported little significant change in two years, and 14 percent expected no real change in the future.

While glasnost' has been largely responsible for the wealth of information provided in the Soviet press regarding the impact of perestroika, relying on official pronouncements may not accurately portray the scope of the reform efforts. In-depth interviews with recent emigrants who formerly held responsible positions in the economic bureaucracy offer valuable insight into
actual reform practices. As detailed a description of the sample as confidentiality restrictions permit is provided in the Appendix. The problem of bias in a sample of Soviet emigrants has been treated extensively elsewhere. Here it suffices to say that bias was minimized by (i) asking informants about their work experience and environment before their decision to emigrate, (ii) employing the assistance of professionally trained interviewers, and (iii) selecting the sample to maximize the variation in the respondents' work experience.

All of the respondents who participated in this project had left the USSR before Gorbachev came to power. Thus, what follows is not an analysis of their response to perestroika per se, but rather their response to economic reform in general. Informants reported on their experience with the economic reforms of the 1960s, 1970s, and early 1980s; some volunteered their experience with sovnarkhozy, introduced by Khrushchev in 1957. Their responses are instructive because they provide the framework for analyzing management's reaction to current reform efforts. Managers responding to perestroika are not operating in a vacuum. They have lived and worked through previous experiments and reforms. One obstacle Gorbachev faces is the tradition of Soviet economic reforms not having the intended impact, and the reluctance of managers to go along with proposed changes. How will this past experience with reform affect the success of perestroika?

Past economic reform efforts relied on organizational changes, policy changes, and performance criteria changes to stimulate output growth through better utilization of resources. Interview data reveal a general consensus among managers regarding the failure of these reforms to increase productivity. Instead, managers reported at length about difficulties they faced with shortages of materials and labor, high labor turnover, and the lack
of labor discipline, all of which contribute to low productivity. Seventy-five percent of the managers (n = 81) and eighty percent of the engineering-technical staff (n = 161) viewed productivity as declining despite reform efforts directed at improving capital and labor productivity.\textsuperscript{33}

When asked "what kind of reform would have worked best to improve the performance of your enterprise?" the majority response offered by participants in the enterprise management project, interviewed before Gorbachev's appointment as General Secretary, focused on giving more independence to enterprises. Indeed, the list of proposed reforms offered by former members of the economic bureaucracy in 1983-1984 reads much like the "Basic Provisions for Fundamentally Reorganizing Economic Management" published in \textit{Pravda} on 27 June 1987. It was not unusual for managers to voice their concern over the problems they viewed as stemming from management's lack of formal decision-making responsibility. The general consensus among these informants, however, was that economic reforms that give enterprises more autonomy would be impossible without corresponding changes in the political and social systems.

Several features stand out in the interview evidence regarding management's perception of the "treadmill" of Soviet economic reforms. First, managers were unable to respond to general questions about the 1965 reforms and those in the 1970s, and reported little change in their work environment in the 1960s and 1970s beyond that associated with technological advance. Thus, while the "treadmill" shows up in numerous decrees and reform proposals in the press, less than half of the managers were able to report on reforms other than the introduction of production associations (ob'edinienie). Fewer still reported knowingly dragging their feet because of previous reform experience.\textsuperscript{34} More likely would be foot-dragging when the reform proposals
were contrary to the interests of the enterprise managers -- counterplanning, for example, because it raised plan targets without corresponding increases in supplies. Second, management viewed adding an administrative layer in the economic bureaucracy with the creation of ob'edinenie as more of a hinderance than help to production because of the additional paperwork and time involved in petitioning for necessary changes in plan targets. While reports of smaller firms benefiting from ob'edinenie because of better access to supplies were typical, management tended to view ob'edinenie as a failure because the overall size of the bureaucracy grew and power remained in the hands of the ministry. Thus, they did not view ob'edinenie as decentralizing control over production or distribution; rather they called for eliminating administrative units to decentralize control. Third, managers cited greater enterprise autonomy and the corresponding increase in competition as potentially the most significant reform to impact production, but they were split in their opinion as to whether there ought to be more or less centralization as the solution to supply problems. On the one hand, managers saw centralized supply as the cause of matching suppliers with geographically distant clients when other suppliers were much closer. On the other hand, managers in high priority industries were aware that centralized supply put the power of the ministry behind their requests for supplies. Whether through formal or informal channels (tolkachi), managers appeared well-informed about the performance of supplying and "competitive" firms. Fourth, managers attributed poor performance and low productivity to an attitude toward work they characterized as stemming from a lack of self-interest or responsibility on the part of the workers, an attitude which none of the reforms appeared to have changed. Fifth, in response to a question about raising product quality by making it a plan target upon which bonus payments depend, managers and
design engineers expressed concern about quality determinations being made after production takes place. In their view, quality is a function not only of the original design specifications but also of the utilization of specified inputs during production. Thus they viewed post-production quality inspections, especially in an environment where supply problems frequently necessitate input substitution, as a relatively ineffective bureaucratic maneuver.

Survey results reported in the Soviet press and interview data collected from recent Soviet emigrants suggest that management is unlikely to oppose perestroika. It puts in place many of the changes they identified as necessary to improve economic performance. Will management support perestroika, and if so, will their support be sufficient to guarantee its success? More importantly, are Soviet managers capable of operating effectively in the new environment perestroika is creating? Is management, or management training, a constraint to perestroika?

MANAGEMENT AS A FACTOR OF PRODUCTION

Although a strong case can be made for using the industrial ministry as the primary unit of analysis in the Soviet economic bureaucracy, the descriptive literature on Soviet planning and enterprise operation has long pointed to the ability of enterprise managers to exercise considerable discretion over the allocation of raw materials and finished goods. Despite detailed plans, managers regularly make decisions to substitute between inputs during production, between production of different types of planned output, between planned and unplanned output, and between production in different plan periods. Management's ability to make such decisions is constrained by external and internal factors: planning and financial agencies,
and local party officials monitor and control enterprise operation. Managers regularly encounter inspections, massive documentation requirements, and special campaigns ("socialist competitions", for example) that negatively impact on the operation and performance of their enterprise. Furthermore, Soviet managers face an environment of input supply uncertainty and bonuses that depend upon fulfilling output targets which are high relative to production capabilities. Managers must regularly cope with labor indiscipline and turnover, and trade union policies that regulate the hiring, firing, and promotion of workers. In many respects, management's response to labor discipline problems, and management's options regarding the adoption of labor-saving innovations or new technologies that require different labor skills, have been limited by trade union regulations.

What is management's role in production? Each day Soviet managers make decisions regarding the quantity and quality of current production. They determine the assortment of output to produce and chose which of the multiple plan targets to meet. Soviet managers are responsible for selecting the quantity and quality of inputs to use in production, authorizing input substitution when circumstances dictate. Frequently facing "impossible" plan targets, managers decide whether to petition for plan corrections, falsify plan fulfillment figures, or demand "rush work" in order to meet plan targets. Confronted with a sellers' market, managers must also decide whether to self-supply or purchase necessary parts, material, or equipment for current production.

In addition to decisions regarding current production, Soviet industrial enterprise managers have some discretion over the quantity and quality of future production. They provide information to planners regarding the productive capacity of their firm and submit input requirements for future
plan targets. More importantly, however, managers make decisions regarding product and process innovation. One of the criterion for the success of perestroika will be whether it succeeds in addressing the institutional barriers that distort the use of R and D resources and impede the flow of technological improvements into production.37

Managerial decisions regarding the quantity and quality of current and future production are influenced personal characteristics: experience, career goals, and attitude toward risk, and so forth; objective conditions: the availability of financial and physical inputs, an adequately skilled workforce, industry or enterprise priority, and plant size and geographic location; and subjective conditions: sufficiently high bonus payments, for example. The importance of personal characteristics stood out in discussions with recent Soviet emigrants who were expert informants on the conditions under which management would respond favorably to pressure from planners to innovate versus initiate innovation themselves. Innovative managers were classified as "good soldiers," "risk takers," and "progressive leaders."

Are Soviet managers adequately trained? Successful managers play an active role in establishing the goals of their organization and are able to plan, guide, or direct people to attain those goals. Successful managers have a comprehensive knowledge of their organization and are willing and able to accept both the risk and responsibility of making decisions that affect the organization's operation and performance. Managers also are responsible for monitoring and responding to employee performance.38 Granick compares managerial training and managerial careers within the enterprise in four industrialized countries (England, France, the United States, and the Soviet Union).39 For the USSR, his findings regarding the type of educational training (primarily engineering), experience (at least 5 years in a given
managerial post with limited prospects for transferring across economic branches), and career paths (promotion within industrial enterprise hierarchy, with limited opportunities for promotion to ministerial hierarchy in the same industry, and limited supervision of research and design activities) are underscored by the work experience of the recent emigrants who participated in the Soviet Interview Project. The typical manager had an engineering education received from an industrial institute. None of the directors reported receiving any special managerial training prior to beginning employment. Once employed, many of the managerial and staff personnel participated in courses to improve their qualifications. Rarely did they view these ministry-sponsored courses as a worthwhile expenditure of their time.

Managerial personnel employed in the U.S. in jobs similar to what they held in the USSR compared their training and experience with their U.S. counterparts. In their view, their technical training was more extensive, but their training in areas such as marketing and developing cost accounting techniques was not adequate to prepare them for this kind of work in U.S. firms. Even former managers of firms producing goods for consumers, where sales was a primary plan target (one that determines whether a bonus will be paid to management) and where they acknowledged the demand orientation of their firm by frequent reference to "market studies" and "trade exhibitions," reported their lack of success in marketing their products locally. Managers were forced to ship their unsold surplus to rural areas (including Siberia), where a sellers' market still exists for consumer goods, in order to meet sales targets. Managers viewed the lack of computer training and access to computers in the USSR as a major difference with the U.S.
IS MANAGEMENT A CONSTRAINT TO PERESTROIKA?

Soviet leaders appear concerned that because enterprise managers have worked only in an environment where the plan dictates their decisions, they will be unable to cope with the new, "competitive," environment which perestroika will put in place. The Minister of Finance, Boris Gostev, said in an interview published in Pravda (19 August 1987) that 13 percent of all state-run businesses were unprofitable, blaming poor enterprise management for the 38 billion ruble state-enterprise debt. Enterprise managers, however, point out that their ability to perform successfully under perestroika depends more on the availability of suitable materials and equipment than on whether management is elected or appointed.40

What does interview evidence contribute to the debate over whether management is a constraint to perestroika? Interview evidence documents how managers in the 1960s, 1970s, and early 1980s coped with an environment characterized by input supply uncertainty and bonuses that depended upon fulfilling output targets which were high relative to production capabilities. Managers regularly competed for materials and successfully maneuvered to satisfy the relevant performance indicators. Managers initiated innovation whenever rewards outweighed risks and participated in available training programs to upgrade their skills. They reported having virtually unlimited access to information on the latest technology in their field. Their promotions depended upon their training, experience, and performance. The skills they developed in the Soviet Union were, more often than not, sufficient to qualify them for similar employment in the U.S. Managers were concerned about the reputation of their firm, and would risk the personal consequences of failing to fulfill annual plan targets in order to stabilize the enterprise's production goals and ensure bonuses for the workforce.
Managers felt constrained by documentation requirements, reporting that 25-30 percent of their time was consumed by filling out paperwork. Managers were also constrained by local party officials assigning part of their workforce to rural areas for days, weeks, or months at a time. With the exception of the construction industry, managers tended to view ministry officials as more powerful than financial or local party officials.

*Perestroika* has yet to give managers real discretion over their workforce. In an environment dominated by "state orders," *perestroika* has not yet resulted in the predominance of direct contracts between enterprises, nor has state control over retained earnings been eliminated. State control over access to hard currency continues to limit management's options regarding the acquisition of machinery and equipment.

Partial implementation is more of a constraint to *perestroika* than managerial competence. Competent managers of Western firms would be no more likely than Soviet managers to operate successfully in a "decentralized" environment where supplies are still centrally allocated and prices do not reflect any meaningful relationship to the availability of the product. Profitability is impossible to calculate under the current price system. How then will bankruptcy be determined? *Perestroika* thus far has only increased the risk and responsibility managers face; compensatory rewards have not yet been implemented. Rational managers will be reluctant to alter their decisions in light of the intrinsic inconsistencies and partial implementation of *perestroika*. 
Notes


4. According to top Soviet economists attending a conference in Moscow in early June 1989, the Soviet Union will face social and political unrest and even famine within the next two years unless radical reforms and a quick boost to living standards are brought about. See Radio Liberty, Report on the USSR vol 1, no 24 (16 June 1989). A detailed discussion of the need for political and social changes is found in N. Ia. Petrakov, Democratizatsiia khoziaistvenno mekhanizma (Ekonomika, 1988). Nationality issues highlight political and social concerns. Both the Soviet and Western press were filled

5. Robert E. Leggett, "Gorbachev's Reform Program: 'Radical' or More of the Same?" in Linz and Moskoff (eds.) Reorganization and Reform ..., pp. 23-43.

6. Ibid., p. 27. For general discussion of the possibilities of achieving "world standards" see Malcolm R. Hill and Richard McKay, Soviet Product Quality (New York: St. Martin's Press, 1988). The automobile industry illustrates the problems faced under the current proposals to raise quality standards and operate under full economic accountability. The head of the Ministry of the Automotive Industry, Nikolai Pugin, reported in 1987 that (i) Soviet trucks lag behind the best foreign models in fuel economy, service life and reliability, (ii) labor productivity in Soviet automobile production is about one-fourth what it is at leading firms in capitalist economies, and (iii) only 20 percent of Soviet-built motor vehicles measure up to world standards. [Yu. Rytov and A. Sabirov, Izvestia, 30 April 1987, p. 2; excerpts translated in Current Digest of the Soviet Press, vol 39, no 4 (1987), p. 17] Pugin cited 3 reasons for quality shortcomings: the prolonged period required to develop new equipment and bring it into production, the length of the investment cycle -- imported equipment sits around for years while the
factory is being built, and the low level of research work as measured by the percentage of research time spent on projects that meet world standards or by the ratio of research results per ruble spent. In response to this situation, the automotive industry received 2 billion rubles worth of hard currency during the Eleventh Five-Year Plan to import equipment for use in production or as a prototype for domestic production of the equipment.


11. Firms may, for example, use funds for housing construction, health services, child care and other social needs, recreational facilities, and so
forth; or contribute funds to another firm for use in joint projects. Ibid., pp. 3, 18-19.


17. Tedstrom, "Tricky Business ..."


20. Tedstrom, "Recent Trends ..." pp. 15-16, compares Soviet and CIA figures for Soviet national income and inflation during the 1980s, highlighting the controversy over the reliability of Soviet statistics.


23. The final version of the 1989 state plan calls for a significant increase in resources allocated to the production of consumer goods. See John Tedstrom, "The 1989 State Plan: A Sharp Break with the Past?" Radio Liberty Research Bulletin, RL 493/88 (3 November 1988). Defense enterprises are to increase their production of consumer goods. The retail price reform, originally scheduled for 1989-90, has been postponed indefinitely in order to alleviate consumer discontent.


25. Numerous surveys have been conducted by the Institute of Sociological Research, directed in 1987 by V. Ivanov. Moscow News has also conducted surveys; see for example the survey of 548 adult residents of Moscow in 1988 published by Moscow News (3 July 1988, pp. 10-11), and analyzed by Amy Corning, "Attitudes Towards Privileges in the Soviet Union," Radio Liberty Research Bulletin, RL 317/88 (14 July 1988), pp. 1-8. One of the consequences
of glasnost' is apparent in information overload confronting Western analysts of Soviet society. See the "lament" by Harley Balzer, "Can We Survive Glasnost'?" AAASS Newsletter vol 29, no 1 (January 1989), pp. 1-2.


perestroika. Leontii Bysov and Nikolai L'vov, "Perestroika: politicheskoe
soznanie i sotsial'nye otnosheniya," Vek XX i mir, no 3 (1989), pp. 10-18,
divides a sample of respondents (n = 1,231) by their ideas regarding how
perestroika should occur.

30. CDSP, "Public Wary ..."

31. Ibid.

32. Discussion of potential bias in sample of recent Soviet emigrants to U.S.
is available in several chapters in James R. Millar, Politics, Work, and Daily
Life in the USSR: A Survey of Former Soviet Citizens (New York: Cambridge
University Press, 1987).

33. For more complete discussion, see Susan J. Linz, "The Impact of Soviet
Economic Reform: Evidence from the Soviet Interview Project," Comparative

34. Ibid., p. 142.


36. David Granick, "The Ministry as the Maximizing Unit in Soviet Industry,"
Journal of Comparative Economics (1980), pp. 255-273. For survey of
descriptive literature on Soviet planning and enterprise operation, see Susan
J. Linz, "Managerial Autonomy in Soviet Firms," Soviet Studies vol 40, no 2

38. A survey of the literature describing managerial skills is provided by Peter H. Ho, "Preparing Management for the 1990s," unpublished manuscript, Michigan State University (June 1989). I would like to thank David Vaughn and Henry H. Linz, each of whom had more than 30 years of managerial experience, for sharing their expertise in numerous discussions over the past year.


40. Management's concern over problems arising as a consequence of perestroika is underscored in an article by M. Berger and A. Pashkov in Izvestia (23 March 1988, p. 3) [translated by CDSP, vol 40, no 12 (1988)] on the 'Uralmash' incident -- the Sergo Ordzhonikidze Urals Heavy Machinery Plant refused to accept its 1988 plan. Economic accountability forced the manager to refuse to produce unwanted output, low quality output that the 1988 plan targets required. The director expressed the opinion that economic accountability required managers to have more input into production targets and equipment decisions, and direct contracts with supplying and client firms.
41. Documentation requirements managers face are described in *Trud* (12 May 1983) [translated in CDSP, vol 35, no 19, 1983, p. 10, "Is Paper Flood Swamping Managers?"] -- each year 800 billion official documents filled out, of which 90 percent require no further action.
Appendix

SAMPLE DESCRIPTION

Over 50,000 Soviet emigrants arrived in the United States between 1979 and 1985. This "third wave" of emigration from the USSR led to the organization of the Soviet Interview Project. Under the auspices of the Soviet Interview Project (SIP), nearly 5,000 recent emigrants were interviewed about their politics, work, and daily life in the USSR. This paper utilizes results obtained from three separate interview projects conducted by SIP. Two of the interview projects, the enterprise management study (n = 55) and the science and technology study (n = 31), relied on intensive interviews with expert-informants. Results from a comparable sample drawn from the SIP General Survey sample (n = 2,793) also are incorporated in the analysis of management's response to perestroika. What follows is a description of the combined sample used in this paper. Confidentiality restrictions require aggregation of individual characteristics into broad categories; for example, head of planning department in heavy industry enterprise, or, chief project engineer in a scientific research institute in Leningrad, or, director of enterprise employing over 3,000 workers.

Enterprise Management Study

Fifty-five expert informants interviewed for the enterprise management study reported on their work experience in sixty-two occupations. Forty-two were "managers" (31 in industrial enterprises), and twenty held positions categorized as "staff and other." Informants worked in both priority and nonpriority sectors of the Soviet economy: heavy industry (18), light industry (13), construction and transportation (10), commerce and material-technical
supply (7), and "other" (15 formerly worked in government planning and financial organizations, research institutes, and other organizations).

Nearly all of the top-level managers were men aged 45-60. The majority of individuals whose primary job was in the planning or bookkeeping departments, or "kitchen" as one respondent termed it, were female. Because of the nature of the "third emigration," a large fraction of sample is Jewish. All received at least some higher education in the USSR; the majority participated in management training programs during the course of their work. Most came from Soviet cities with a population of 500,00 or more. All lived at one time or another in either the RSFSR, Moldavia, Ukraine, Belorussia, Latvia, Lithuania, or Uzbekistan.

All were directly involved in some aspect of planning, producing, or distributing goods and services during the 1960s, 1970s, and early 1980s. Several reported work experience from the 1940s and 1950s. The combined management experience of the 55 expert informants easily exceeds 900 years, for an average of approximately 18 years of work experience per informant.

At least eight informants worked in organizations directly subordinate to an all-union ministry. Of the thirty-four asked, twenty-one indicated an affiliation with a production association (ob"ledinenie). Thus the sample of 55 expert informants is heterogeneous with respect to length and type of work experience, range of knowledge, and breadth of perspective.

As part of a general study of contemporary Soviet enterprise management, each informant was asked questions about a variety of topics related to planning, supply, and innovation decision-making; labor-management relations; management training, motivation, evaluation and promotion; enterprise-ministry relations; impact of reforms; and the role of the Party in enterprise activities. Informants were not asked for general opinions about how the
Soviet economic, political, or social systems operate. Rather, they were asked specific questions about their own work experiences and work environments, and how (or if) their experiences changed over time.

Science and Technology Study

The Science and Technology project was designed to investigate factors influencing the diffusion of innovation in Soviet industry. Topics covered in the interviews included the training and career path of design engineers, planning (physical, financial, and supply) for innovation, the role of party officials in innovation process, barriers to innovation, development and design activities, equipment choice, investment decisions, and US-USSR comparisons.

Thirty-one recent Soviet emigrants formerly responsible for designing new technology, developing prototypes, and ultimately bringing products or processes into production, participated in the interview project. The majority were design engineers trained in industrial engineering institutes in various fields of machine building, machine tools and instruments, and energy, who worked in project-making bureaus, design bureaus, or scientific research institutes in the USSR. A few were scientific researchers or computer specialists. All but four formerly worked in organizations subordinate to an all-union ministry; two worked in organizations subordinate to a state committee or scientific academy. Their job titles range from junior scientific associate to director of a scientific research institute. All but two held supervisory positions, but the majority supervised fewer than twenty-five individuals. The informants worked in organizations ranging in size from 250 to over 3,000 employees.
The characteristics of the older and younger respondents are somewhat different. The typical respondent in his late forties had worked as a chief engineer of a ministerial design engineering bureau (konstruktorskoe buro). He worked in Moscow, Leningrad, or a large city in the Ukraine, earned about 240-250 rubles per month, and received one or more "innovators certificate" or patent during his professional life in the Soviet Union. The typical respondent in his late thirties was a senior or junior scientific associate in a laboratory in a scientific research institute. He had received his engineering degree within the last 6 to 10 years and earned less than 200 rubles per month, sometimes as little as 150 rubles per month.

What our respondents have in common is a job in an organization that bridged the gap between basic research and the final process of investment and new technology. At the time of the interview, many of the respondents held jobs in the United States similar to their work in the Soviet Union and were able to compare levels of training, organization of work, availability of information and equipment, and other aspects of engineering and innovation in the two countries.

SIP General Survey

Of the 3,552 persons selected to participate in the first mass survey conducted by the Soviet Interview Project, 2,793 completed the interview, yielding a response rate of seventy-nine percent. Like the enterprise management project and science and technology project, participation in the survey was voluntary, and respondents were assured that both their answers and their participation in the survey would be confidential.
Selecting a sample from the General Survey (G1) with comparable occupation and branch characteristics yields the following results: first, by occupation, 441 respondents who participated in G1 were "leaders" (91), "other managers" (64), and "high engineering-technical workers" (286), who formerly worked in economic branches similar to those reported on by informants in the enterprise management and science and technology projects. Second, of the 441 "comparable" respondents from G1, 148 worked in manufacturing, 107 worked in construction or transportation, 38 worked in material-technical supply, and 147 worked in "other" comparable organizations. Not all respondents with comparable characteristics were asked questions relevant to this study. Thus, depending upon the topic, the number of eligible respondents in the G1 project varies from 191 to 441.

Notes


4. For a complete description of the sample, see Barbara A. Anderson and Brian D. Silver, "The SIP General Survey Sample," in Millar (ed.), Politics, Work, and Daily Life ...